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International Science Fair

The Regeneron International Science & Engineering Fair (ISEF) is a world renowned program of Society for Science (https://www.societyforscience.org/isef/), "a champion for science, dedicated to expanding scientific literacy, effective STEM education and scientific research." It is "focused on promoting the understanding and appreciation of science and the vital role it plays in human advancement: to inform, educate, and inspire."

The Pittsburgh Regional Science & Engineering Fair (PRSEF) is an affiliate to ISEF, and ISEF has been hosted in Pittsburgh three times since 2012.

On May 3-6 ISEF held its annual international science fair judging, and for the first time it was not held live in a host city; it was conducted virtually. There were over 1400 high school projects from more than 1800 students representing in excess of 65 countries, regions and territories. The projects were selected as the best of the best from affiliated fairs to compete in 21 different science and engineering categories for more than $5 million in student awards, scholarships, internships and prizes. Students were judged by more than 1000 Grand Award Judges, including me, and various Special Award Judges.

"Judges may include university faculty and scientists, industrial engineers and scientists, representatives of private and federal research centers and agencies, medical researchers, post-doctoral fellows, and senior graduate students." Judges must have: a PhD, MD or equivalent in a STEM subject; or six years of related professional experience; or be an experienced graduate student . This year was my third as either category co-chair or judge.

Just to give you an idea about some of the 21 scientific and engineering categories in which these kids competed, with the emphasis on ones that are particularly relevant to today's health, global warming, and environmental crises, here are a few category titles: (1) Biomedical and Health Sciences; (2) Cellular and Molecular Biology; (3) Computational Biology and Bioinformatics; (4) Energy: Sustainable Materials and Design; (5) Earth and Environmental Sciences; (6) Robotics and Intelligent Machines. Notice that I did not name staples such as Chemistry, Mathematics, Physics and Astronomy, and Plant Sciences, but they are among the 21 too.

So, how does this relate to libraries? Well, as I have explained before when writing about the local PRSEF, young people who participate in science fairs are immersed in and learning about the Scientific Method, and applying that to researching important problems. On the one hand, this prepares them for a professional life in science and engineering, but on the other hand it prepares them for life itself. The latter is vitally important even for learners who are not interested in science and engineering careers, and some who compete at the PRSEF level say they are not. Libraries should be helping to build this capacity for all.

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And, Murrysville Community Library has made a start to do so. I invite that you go back into our archive of The Magic Library Card! articles at https://www.murrysvillelibrary.org, specifically for articles nos. 3, 7, 9, 16, 17, 20, 36 and 38. There you will read about: (1) Storytime STEM-packs™, a preK-4 product accompanied by standards-based STEM training for library staff; (2) Teen Power Library and its on-line resources for promoting student bibliographic skills; and (3) TechNook, an in-library pilot site for streaming high-value STEM and other content to kids (and adults) of all ages.

So, in the spirit of ISEF, ask your librarian about those three relatively new STEM resources for kids.

Charles B. Greenberg
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